**Unit 1.3 Government Intervention**

*Calculating the effects of price controls (HL Only)*

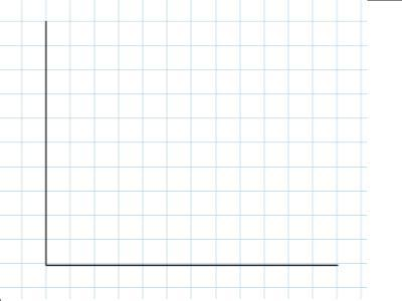
**Introduction:** Assume the following equations represent the supply and demand for rice (in millions of kilograms) in India in relation to the price per kilogram (in Indian *rupees*):

**Qd = 80 - 10P Qs = -20 + 10P**

1. Calculate the equilibrium price and quantity of rice in India.

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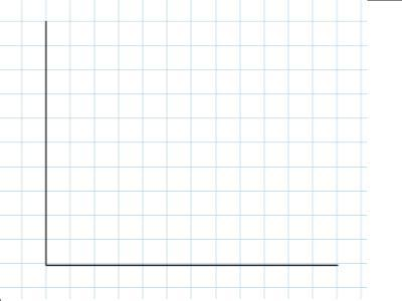
1. On the graph below, illustrate the Indian rice market in equilibrium.



1. Assume that the government, in order to promote stable food price, places **a price ceiling in the rice market at 6 rupees** per kg and a **price floor at 4 rupees** per kg. Add dotted lines on the graph you drew in #2 at these two prices. Explain whether these price controls are effective or ineffective at the current equilibrium price.

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1. Assume that due to a particularly fertile growing season, the supply of rice in India increases to **Qs = -10 + 20P**. The demand remains at **Qd = 80 - 10P**. Illustrate the effect of this increase in supply on the market for rice.



1. Calculate the new equilibrium price and quantity for rice following the increase in supply.

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1. Explain the effect of the government’s price controls on the market for rice following the increase in supply. Calculate the amount of excess supply created by the 4 rupee price floor.

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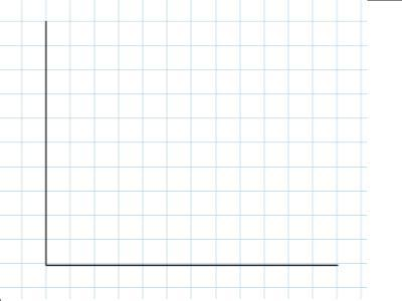
1. Assuming the government takes no action to enforce the minimum price of 4 rupees, how will the free market likely resolve the disequilibrium that exists in the rice market due to the price floor?

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1. Next, assume that the Indian government decides to intervene in the rice market to make sure the price remains at the desired level of 4 rupees. How much would it cost the government (and therefore taxpayers) to buy the surplus rice at the desired price of 4 rupees per kilogram?

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1. Assume that during the following growing season, severe droughts cause the supply of rice to fall to **Qs = -25 + 5P**. Demand remains at **Qd = 80 - 10P**. Illustrate the effects of this decrease in supply on the graph below.



1. Calculate the new equilibrium price and quantity of rice following the decrease in supply.

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1. Explain the effect of the government’s price controls on the market for rice following the decrease in supply. Calculate the amount of excess demand created by the 6 rupee price ceiling.

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1. Assuming the government takes no action to enforce the maximum price of 6 rupees, how will the free market likely resolve the disequilibrium that exists in the rice market due to the price ceiling?

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1. Next, assume the Indian government decides to intervene in the rice market to maintain the desired maximum price of 6 rupees. How much rice would the government have to release into the market to push the equilibrium price down to within the desired price range.

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1. Who benefits from maximum price controls in the markets for goods such as rice? Who suffers?

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1. Who benefits from minimum price controls? Who suffers?

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1. What are some disadvantages of price controls schemes such as that described in India’s rice market?

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